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approach

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EDITORIAL

Admitting Transgressions

The aviation community has always felt that admitting mistakes in an open forum will benefit others and make for a safer environment. The idea of "saving face" by hiding an error is distasteful and generally frowned upon. During the course of any flying career, mistakes are bound to enter into the equation. Owning up to them should be considered as sort of a cleansing process. There is guilt associated with wrongdoing, and any psychologist will tell you it is good for mental health to unload guilt.

There are, of course, different levels of admission. The following contributors handle each day with a clear conscience:

- "I hot-switched out of Alert-5 and, in my haste to get to Wardroom One before they stopped serving lunch, I left the seat armed."
- "Following my first cruise, I neglected to check the date on the chart room pubs prior to a cross-country. I didn't realize how grossly out of date they were until I was cleared for the approach to runway 1, vice the runway 36 on my approach plate."
- "Although not scheduled for ACM, I participated in a full-blown 1v1v1 under the vague title of a 'gunsight tracking drill.' "

The following contributors, on the other hand, probably bite their nails, show aggression toward small animals and have rashes that won't go away:

- "I told the CVIC debriefer my flight had not dumped any gas when actually we had. In retrospect, I believe this was a factor in the slashing of the defense budget as Congress refuses to give us new jets if we can't account for the gas we used in the old ones."
- "I said, 'The Ops O is a goober,' over base freq after he'd removed his helmet to itch his head while setting in the pits."
- "As SDO, I hot-reeled 'Blame it on Rio' with our sister squadron even though the ship's movie booth said that wasn't allowed."

I'll prove just how painless a good guilt purge can be by admitting I've done everything that is mentioned in "Slow Down the Chain" which appears on page 11 in this issue. Man, that feels good! Are those birds singing? I've never noticed the sky was so blue. . .

Ward Carroll

Lt. Ward Carroll
Editor

inside approach

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The cutting edge of freedom as seen through the eyes of Approach illustrator John Williams.

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It Ain't Over '

'Till It's Over

By Cdr. Richard Shipman

THERE was an instructor in the training command who was famous for drawing pictures to illustrate a point he was making during the brief. During one such brief he drew a picture of what appeared to be wheel chocks. He then drew an aircraft with its main mounts securely in those wheel chocks. The question to his students was what this illustration represented.

No one hazarded a guess as to the significance of a parked aircraft. "That, my friends," explained the instructor, "is when the flight is over. Not when you touch down, not when you clear the runway, and not when you enter the ramp area. Only when you're safely in the chocks can you say you've cheated death once again."

This piece of basic aviation philosophy is truer today than ever. Particularly if your flight concludes with hot refueling. More than one aviator has had his daydreams of cold beverages and hot women interrupted by the even hotter flames of a fire in the fuel pit. Receiving volatile fuel at high pressure while sitting on an operating blow torch is certainly not time to relax your vigilance.

An A-6 crew found this out the hard way. The nose gear of their Intruder retracted while they were hot refueling, breaking the refueling line and starting a fuel-fed fire. Both crew members manually egressed from the aircraft without injury but with a massive flow of adrenalin. Mishap investigators found that the landing gear interlock solenoid, which prevents the gear handle from being moved when the aircraft is on

. . . The nose gear of their Intruder retracted while they were hot fueling, breaking the refueling line and starting a fuel-fed fire . . .

the ground, was defective. The handle was raised either because the pilot inadvertently bumped it or aircraft vibration caused the handle to move. The aircraft sustained alpha damage.

The same cannot be said about a recent mishap. Another A-6 was hot refueling when a fuel leak ignited and engulfed the aircraft in flames. The pilot manually egressed over the side of the aircraft, but the B/N ejected and was killed.

In another mishap, fuel spray was sucked into one engine of an A-6, causing a fire. The crew had finished hot refueling and was waiting for the fuelers to disconnect the fuel hose. The fuel crew, however, was having difficulty removing the refueling nozzle from the aircraft. All of a sudden the fuel nozzle released from the receptacle, spraying fuel under pressure onto the A-6.

Fuel spray was ingested into the starboard intake, causing a severe compressor stall. A fire ball erupted around the starboard intake and under the nose. Fortunately, the fire did not spread and was put out by the pit crew. The flight crew stayed in the aircraft. Cause of the mishap was a material failure that allowed the nozzle to come off with fuel still flowing. The aircraft sustained minor damage, but no one was hurt.

Since 1983, there have been six mishaps stemming from fuel pit fires. Interestingly, the A-6 has been involved in five of them. These fires have resulted in two destroyed aircraft and one crew member killed. Clearly, the flight ain't over while you're in the fuel pits — especially if Medium Attack is your game.

Every aircraft has a section of NATOPS that describes hot refueling procedures for that model. The A-6 manual, for example, lists these procedures: spread the wings, secure emitters, ensure a fire bottle is present, close the canopy and more. However, most manuals leave it to crew discretion whether or not to safe the ejection seat or stay strapped in. Thus, if you are flying a multicrew aircraft, it's critical that you brief and understand what procedures you are going to use in the fueling pits.

In addition to briefing your refueling configuration, you should also anticipate emergencies that could happen in the pits, just as you do for in-flight emergencies. If a fireball erupts, are you going to sit tight, manually egress, eject or try to taxi out of the pits? There are no pat answers because every circumstance is different, but there are a few factors that you'll want to consider in planning your actions.

Of the six fuel pit fires that have occurred since 1983, four were caused by fuel ingestion into an engine. This typically leads to a compressor stall,

or explosion, and a momentary fireball. The pilots who chose to hunker down underneath their closed canopies while the pit crew extinguished the fire suffered no ill effects. In most cases, fires ignited by fuel ingested into the engines diminish after the initial fireball and usually can be controlled by the pit crew.

"Usually" may not be good enough for you if the flames are lapping around the cockpit, and it's getting mighty hot. Unfortunately, the alternatives to riding out the fire are not too attractive. You can manually egress from the aircraft, assuming there is no problem getting the canopy open and you have time to completely unstrap from your seat. Also, the fire has to be burning away from your exit path, something that might be unlikely in a large fire.

Another option is to apply a handful of power and taxi out of the pits. This would involve using a lot of power, jumping the chocks and forcibly disconnecting fuel lines, all of which could threaten workers in the pits. Also, if the aircraft was already on fire, it might not solve your problem.

The last alternative is ejection. No one likes the idea of ejecting while sitting on the ground, particularly since there's a good chance you could come back down in the middle of the fire. It's not an option to rule out, however, depending on the magnitude of the fire and other circumstances. If you want to keep this as an option, you've got to stay strapped in every time you refuel and ensure that any other crewmen do likewise. Know your ejection envelope cold!

Since none of the post-fire options are attractive, the best thing to do is strive to prevent fuel pit fires. For starters, it would be nice to know why the A-6 has been involved in virtually all the mishaps. Is there a problem with refueling receptacles? Is the refueling point closer to the intakes than other aircraft? Is there a training problem with A-6 pit refuelers? Can better procedures be used during hot refueling, such as shutting down the starboard engine? It may be that the relatively high incidence of fuel pit fires in the A-6 community is just a coincidence, but statistically that seems unlikely.

All squadrons can benefit from an active program to prevent pit fires. Most fuel pit fires have been caused by leaking hoses or fittings, defective equipment or poor procedures by the refueling crews.

Safety officers, are you monitoring the training refueling personnel are getting in your squadron or on your base? Do they know how to pump gas, understand the hazards involved, and can they fight any fires that erupt? Maintenance and safety personnel should regularly inspect the material condition of the refueling machinery. Minor equipment problems lead to small fuel leaks, which cause major fires.

Finally, talk about fuel pit fires during AOMs and during the brief. Have some course of action in mind. Don't wait until you're on the "hot seat" to do your thinking. ◄

Cdr. Shipman is a naval reservist who flew A-4s and A-7s on active duty. He is a pilot for Piedmont Airlines.

This article addresses the A-6 fuel pit fire problem. The questions posed at the end of the article can be answered as follows:

Is there a problem with the fuel receptacles?

Yes — Many receptacles (actually called FUEL NOZZLE ADAPTERS and incorporated on most jet aircraft) have become severely worn to the point where built-in fuel nozzle safety features are rendered ineffective.

Is the refueling point closer to the intakes than other aircraft?

YES — Although the nozzle adapter is beneath and behind the right intake, it is closer than most other aircraft.

Is there a training problem with A-6 pit refuelers?

YES — The training problem is not limited to A-6s, however. Training is a fleet-wide problem.

Can better procedures be used during hot refueling, such as shutting down the starboard engine?

YES — With a little help from higher authority to shift refueling electrical power from the monitor bus to the essential bus, single-engine ground refueling can be easily and safely accomplished. — *LCdr. W.D. Bankart, Head Aviation Mishap Investigation Division, Naval Safety Center.*

Good News, Bad News

By Lt. Rick Morgan

HEY, bunky, it's another great day in the Pacific Northwest, in the service of your country and the Navy.

The good news is that you're scheduled for a section low level.

The bad news is that on preflight you discover the aircraft is in a 10-degree AOB with its starboard mount at parade rest.

The good news is that with a little nitrogen servicing, the strut looks as good as new.

The bad news is that on start, the rpm on the right motor hangs up at 32 percent and EGT heads for the moon.

The good news is that you carry out the immediate action EPs and shut down the recalcitrant power plant. After checking under the hood, the ground crew signals for another start attempt.

The bad news is that this time you perceive a sheared starter shaft when you see 0 rpm with the starter engaged.

The good news is that good old maintenance control has reserved another steed for your use.

The bad news is that on its preflight you discover the bird is not armed, and there's a fuel leak in the starboard wing butt.

The good news is that maintenance has yet another glorious warbird available for your beck and call.

The bad news is that it fails its prestart boost pump test. You intuitively realize that this means you have no means of checking operation of your engine-driven boost pumps, and that, sadly, this Prowler is also down.

The good news is that the trouble-shooters are able to quickly replace the boost pump relay, and now everything checks good.

The bad news is that you are now 70 minutes late for your takeoff time.

The good news is that your wingman is still ready to go, so you blast into the skies for a 1.5 of fear and loathing at 500 feet across Eastern Washington.

The bad news is that mid-way through the awesome VR-1355 "Spine-of-the-Cascades" low level, you notice your combined hydraulic system indicates it is rapidly spewing its life blood overboard.

The good news is that you carry out the applicable NATOPS procedures, lower the flaps, slats and gear by emergency means, and make an arrested landing back at homeplate.

By following NATOPS and using your head, your crew has been confronted with several hazardous situations, not pressed your luck and nursed a sick bird back to the nest with the training "X" complete.

Now that *is* good news!

Lt. Morgan flies with VAQ-129, an EA-6B squadron based at NAS Whidbey Island, Wash.

If this tale is true, or if similar things are happening in your outfit, it's time the old man talked to the MO. Pilots shouldn't have to discover problems like these. Strong indications here of malodorous maintenance practices. — Ed.

Habit Patterns

Tricks of the Trade

By LCdr. Fred Johnson

SEVERAL years ago I employed a travel agent of east Indian descent with the unusual name of Rima. Since then, every time I start a bomb run, I murmur her name — a habit pattern that helps me avoid pulling off target with my airplane still laden with bombs.

In your first days of flight training you heard the old hands preaching habit patterns. They were talking about tricks of the trade that helped them become old hands instead of smoking holes. While some habit patterns are learned in flight training, many pilots put them to use only after near misses or "air scares" during their years of flying. Other habit patterns result from some embarrassing event, such as explaining to the skipper why the bombs did not come off on the first pass over the target, or paying Paddles a bottle for a touch-and-go that wasn't supposed to be a touch-and-go.

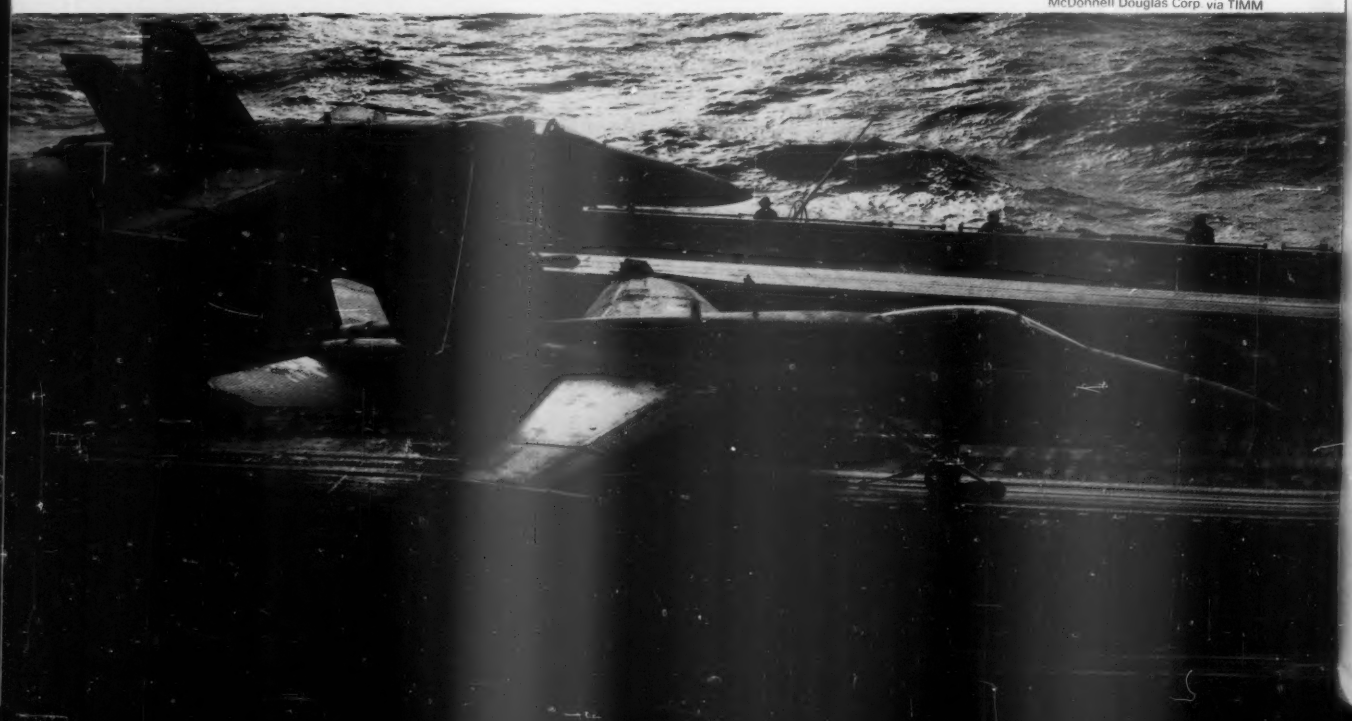
. . . On your way to the catapult, touch the ejection handle and emergency jettison button so that you know exactly where each is. . . .

Ask any experienced pilot what tricks he uses to protect his derriere, and you will probably get a long and varied list. A plan for using the radar altimeter is a common habit pattern used by veteran aviators. Some keep the radar altimeter warning ahead of the aircraft in a descent by resetting the warning to a lower altitude each time the alarm is heard. This keeps the pilot more aware of his rate of descent and how close he is coming to the ground.

Airplanes that have multiple altitude warnings, like the F/A-18, lead to a different approach. An example plan is to set the barometric warning to platform altitude (5,000 feet), the radar altitude warning to 2,000 feet, and the radar altimeter bug to 1,200 feet. Regardless of the plan used, if the pilot employs the same scheme on every flight, he will know how far he is from the ground.

Even before the flight starts, you

McDonnell Douglas Corp. via TIMM



can use habit patterns that are helpful in preserving your health and that of your airplane. Don't wait to FOD an engine as you taxi out of the chocks before including a mini-FOD walkdown in your preflight inspection. Avoid lowering the launch bar before spreading your wings and rogering the weight board. On the way to the catapult, touch the ejection handle and emergency jettison button so that you know exactly where each is. Make sure you can reach that jettison button with your harness locked.

Frequently, habit patterns are actions that are tripped by other actions. The switch to marshal frequency may be used as a reminder to lower the hook. Rolling wings level in the groove might trigger a final check of the landing gear. The physical act of stepping out of the cockpit may be a reminder to verify that the ejection seat is safe.

Popular tricks of the trade involve remaining in contact with a switch that, if forgotten, may put you in extremis. For example, after placing the wing spread switch to the spread position, you might leave your hand on the switch to avoid forgetting to lock the wings once they are spread. Keeping your hand on the dump switch might prevent you from dumping more gas than you intended.

Habit patterns like these are useless unless they are used in every flight. If the omission of a procedure causes an alarm to go off in your brain, then it has become a valuable habit pattern that will help protect your body and the taxpayer's machine you fly.

Oh yes, back to Rima. I recall her name every time I bomb, not because she was an exotic beauty or efficient travel agent. Instead, I repeat her name because of the acronym I created from it: Roll in Master Arm.

LCdr. Johnson is maintenance officer with VFA-82. His previous tours were with VT-24, VA-46 and NATC.

That Trout-Like Stare

By Ltjg. T.J. Walker

DURING the CQ phase of the A-6 FRS syllabus, I was crewed with another nugget. After what seemed liked an endless time in the bounce pattern, we manned up for another FCLP hop. We were both low in experience, but we had been flying together for several weeks and had developed good crew coordination. The slightest traces of salt had begun to appear. We launched and turned toward the outlying field. It was night, with low clouds and scattered showers everywhere. We really had to work to remain VFR.

We completed the bounce period and made our way back home, in solid IMC. We contacted approach control and asked for a CCA Mode II. The controller was busier than normal, and we suffered through an endless stream of radar vectors. We lost our generator. The pitch-black IMC, combined with increasing rain, moderate turbulence, mild vertigo and low fuel state, had our nugget pucker factor up high.

Soon, we found ourselves established on course at six miles. We broke out with the field in sight at three miles. The weather seemed to improve, and we had the runway lights with landing checks complete. The worst seemed over. With sighs of relief, we continued our textbook approach.

At three-fourths mile, approach told us to break off and take it around the right side of the runway. Something about an aircraft on the runway. We waved off and offset to the right. We climbed to 500 feet upwind and waited for further instructions. We looked at the runway but couldn't see another plane, only several aircraft holding short.

Suddenly, the beam from a red anti-collision light filled the cockpit. Looking out below our left wing, we saw the growing silhouette of another A-6. We quickly dropped our right wing as the controller called us.

"801, cleared left downwind, contact the tower." We took a quick look back at our uninvited wingman, followed by a concerned glance between me and my pilot. The other jet hung there for a moment in something that can only be described as "very close" formation. Then he continued to climb and accelerate, and proceeded out in front. We asked approach if they had traffic for us. After a pregnant pause, the controller said, "Affirmative. Twelve 'clock, 2 miles, company traffic, departing." With our eyes bugged wide open, jaws hanging down in our laps, and wondering if we had soiled our flight suits, we turned downwind and made an uneventful landing.

We returned to the squadron, still shaken by how close we had come to a midair, and we telephoned the approach facility. They mumbled something about a breakdown in communication between tower and approach, and they assured us they would investigate the matter. We checked with the other A-6 crew when they returned. Had they been warned of our position? Did they see us? A puzzled look, followed by trout-like stares, gave us our answer. They never knew how close we had all come to disaster.

Ltjg. Walker is a B/N with VA-95.

Prop Dinger

By Lt. Bill L. Yancey

I went through the NATOPS emergency checklist several times, but the gear remained up. The nightmare of a crash loomed as a possible reality.

IT is a typically beautiful Friday in San Diego. Everyone is looking forward to the coming weekend and spending time at home before leaving for an at-sea period. Today, I was scheduled as the aircraft commander of an FCLP/Pilot trainer for someone who would be taking my place as squadron NATOPS instructor. He hadn't flown the E-2 from the right seat and needed extra training for his upcoming Super Stan check.

The FCLP portion would be routine. I would ride the right seat while the other pilots flew a total of 40 to 50 passes. In an E-2 squadron, someone has to sacrifice his posterior by riding through everyone else's passes. I didn't mind this time because I wasn't going to the boat, and the flight would put me over 2,500 hours total flight time.

With the shortage of aircraft in the E-2 community, meeting scheduled requirements is a function of how many aircraft another squadron can loan us. The aircraft assigned for the flight hadn't been with the squadron long. It had been transferred from a sister squadron at Miramar. The E-2 had problems passing acceptance inspections, but with a lot of overtime by the maintenance troops, it checked out 4.0 on the PMCF.

I attended a group brief for the FCLPs, then briefed the pilot trainer separately. Everyone had a good flight. Even the new guys flew some pretty good passes, making it easier on me.

I had planned on doing the pilot trainer at San Clemente Island, so after the last pilot had finished bouncing, we taxied through the fuel pits for extra gas and made a crew hot switch. I moved to the left seat, and we taxied to the holdshort. The copilot made the takeoff and flew us to San Clemente.

As we approached San Clemente, I requested clearance for high-key over runway 23. The copilot had never flown a PPEL from the right seat and needed the practice before his check. After turning toward low-key, the copilot asked for the gear-down landing checklist. I extended the gear and noticed, almost immediately, that the right main mount was still up! I took control of the aircraft and waved off the approach. I asked the copilot to check the right main gear. He said it was up, but the forward gear doors were open, which meant we were in real trouble.

On the E-2, if the forward main gear door doesn't open when the gear is extended, that usually means a valve failure; but the gear should blow down. But if the forward gear doors are open and the gear is still up, blowing down the gear probably won't work.

I told the copilot to read the NATOPS section on landing gear emergencies. En route to Miramar, I went through the NATOPS emergency checklist several times, but the gear remained up. I cycled the gear up and down a few times hoping the right gear would extend, but the nightmare of a crash loomed as a possible reality.

I waited to blow the gear down until we were over the field. I tried negative and positive Gs while extending the gear and yawing the plane. Nothing worked. It was time to call the squadron and tell the Skipper that one of his aircraft was about to go hard down.

Everyone in Hangar Six must have heard my call because they all wanted to talk to me. Questions and advice poured from the radio.

"Have you tried this?" "Well, how about this?"

To my knowledge, no one had made a trap with one main gear up in an E-2. Maybe some of you "old guys" have seen or heard of one, but I haven't.

I entered the overhead Delta pattern. By now, we were low enough on fuel to permit flying single-engine with the gear down. At least, I hoped so. I asked the copilot to continue reading the checklist for blowing the gear down.

The guys on the ground suddenly came up with what they thought was a brilliant idea: a touch-and-go on two points to jar the hung gear loose. Some idea! That procedure's not in NATOPS and for good reason: It won't work. How do you have a sink rate great enough to make a landing on two points, hard enough to jar loose a gear still on the "J" hook, without hitting the prop? Add a crosswind from the right and you can understand why my attempt at a touch-and-go was a soft touchdown to a quick wave-off.

After my unsuccessful attempt and burning a little more fuel, it was time to land. I told the tower and the squadron that I was proceeding east of Miramar to set up for a trap on runway 24L. I had the copilot stow all loose cockpit items in the rear of the aircraft, and at about six miles east of the field, we turned inbound while I secured the right engine.

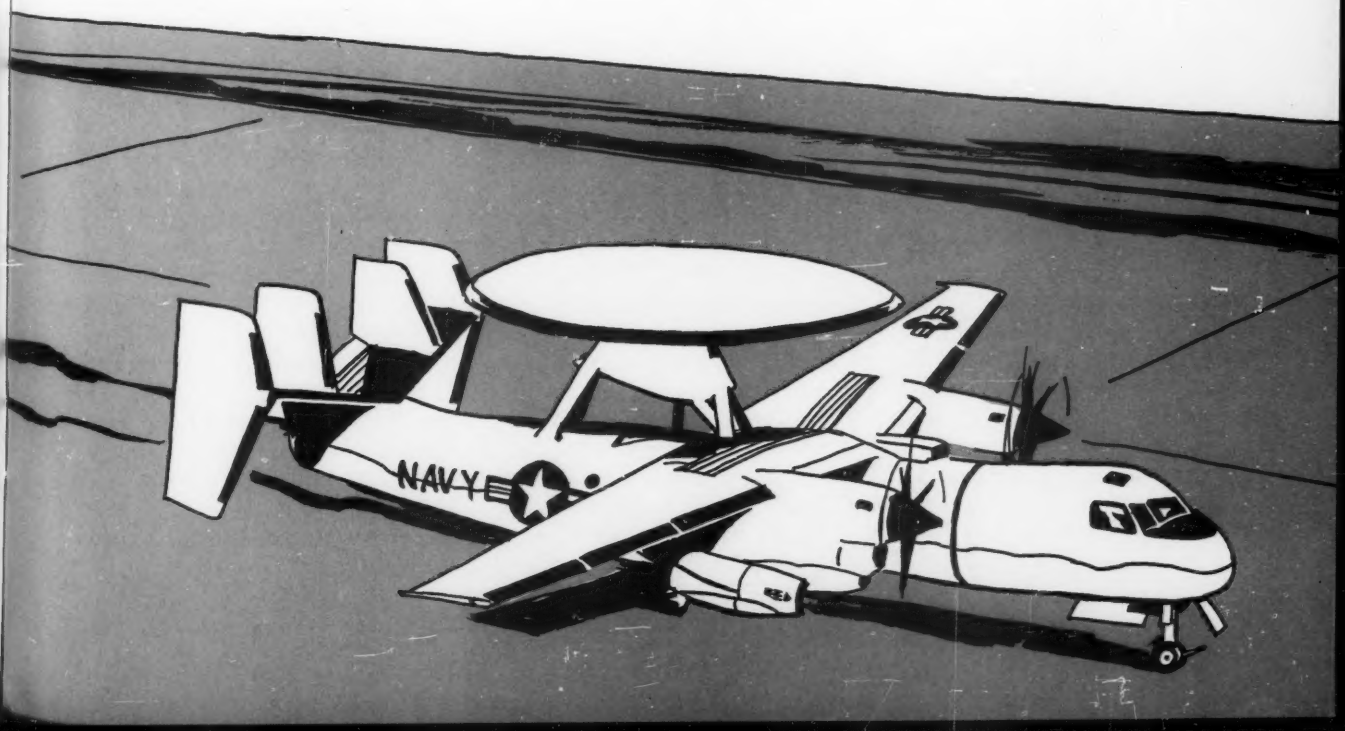
The scariest part of the whole incident came next: I couldn't see the field! It was nearly sunset, and a haze layer had moved over the base. By the time I could see the field, I was close and too far right for a safe approach to 24L. The LSO was my best friend in the squadron.

"I think you'd better take it around," he said. That was easy for him to say. Fortunately, the E-2 has plenty of power for a single-engine wave-off with two gear down. Holding 20 units AOA and 12 degree AOB gave a climb rate of 300 feet per minute, which set me up in a perfect position for another approach to 24L. I didn't raise the gear because I wasn't sure what effect raising and lowering it again would have.

My second approach worked out great. It helps to see the field. I put the plane down 50 feet to 75 feet before the arresting gear, allowing airspeed to bleed off before the hook engaged the wire, on centerline. I had briefed the LSO to tell me when the hook engaged at which time I would pull the left engine "T" handle. I remember glancing at the airspeed indicator just before I caught the arresting gear. The indicator read 85 knots to 90 knots. At that point, I held left aileron, put my right hand on the left engine "T" handle, and waited for the LSO's signal.

"Trap! Trap!" he called. I pulled the "T" handle, held full left aileron, and pushed the nose onto the deck. The plane turned slowly to the right and came to a rest on the runway edge. The slow engagement speed, holding full left aileron, plus having a wide runway combined to help keep the aircraft on the runway. The left brake was usable via the aux-brake selector valve, but I chose not to use it because the arresting gear stopped the plane quickly. ◄

Lt. Yancey was with VAW-116 at the time of this incident. He was featured in the Bravo Zulu column in the December 1987 issue. He now flies with VR-60.



Intimidation and Trust: The New Guy Syndrome

By Ltjg. Robert Wucker

AS a student NFO, you're expected to learn the basics of flying under controlled conditions. While many simulator hours are dedicated to learning emergency procedures, actual in-flight emergencies are often handled by the instructor. The inexperienced student usually gives help as requested by the instructor.

After receiving his wings of gold, the new RAG student is told that he is no longer a "conehead." He is an important crew member, and is expected to participate in the decision-making process. As in the training command, simulated emergency scenarios prepare aircrews for the worst situations. During real emergencies, however, do those shiny gold wings make you an integral part of the team?

A friend of mine told me a story about his first F-14 cross-country. Shortly after departing Andrews AFB, he felt an unfamiliar vibration in his cockpit. He asked the pilot if he felt anything unusual, and the pilot replied, "No." As the flight continued, so did the vibration, and the RIO asked about the hydraulics. The pilot scanned his gauges and saw a fluctuation in combined hydraulic pressure. The wingmen — two instructors — reported seeing a stream of hydraulic fluid. The student RIO read the appropriate emergency checklist items with the instructor, including the last step: Land as soon as possible. A short time later, the vibration stopped, and the student RIO asked if everything was OK.

The pilot replied that things were actually worse since the combined side pressure had fallen to zero. The checklist for that procedure also called to land as soon as possible. The three instructors in the flight discussed options and decided to bypass several suitable airfields for reasons like "bad maintenance" and "that's in the middle of nowhere." They agreed to continue to Wright-Patterson AFB. The student felt comfortable with that decision since three experienced instructors had made it.

After an uneventful landing, the postflight inspection revealed not only a hydraulic leak, but a cavitated hydraulic pump. The failed pump had produced enough heat to melt paint and scorch metal. After seeing just how close to catastrophe they had come, the crew felt lucky to have made it to Wright-Pat.

Here's another story involving a nugget RIO with less than 100 Tomcat hours. On his second night carrier flight, he was crewed with a second-tour lieutenant commander who had more than 3,000 total flight hours. During a tanker rendezvous, a fire light illuminated. The aircrew performed the required boldface procedures and noted no secondaries. The wingman did not see any fire. Based on the lack of cockpit indications and the wingman's inspection, the pilot was convinced that he had a false fire light indication. The pilot took over communications and told CATCC that he was going to restart the engine and return to the ship. The nugget RIO had a feeling that they should head for land; the nearest divert was over 70 miles away. However, he did not stress the point because of his pilot's experience. .

After dumping fuel, the pilot tried unsuccessfully to restart the engine. A fuel system failure further compounded the problem. The crew ejected one mile behind the ship. The causal factors listed by the mishap board included "attempted single-engine CVN recovery with suitable divert field available."

How can flight crews make such poor decisions when NATOPS is so clear? The student or nugget may feel intimidated by a more experienced crew member, and may lack confidence in his own decision-making abilities or in his knowledge of his aircraft's systems. The seasoned aviator may be influenced by ego or limited systems knowledge in an attempt to hack the program.

How do we overcome this problem? First, realize that you must follow the emergency procedures covered by NATOPS. Second, those with hours and those without must build a better rapport and understanding. New guys should never be too intimidated to make suggestions. Old guys should never be unwilling to consider such suggestions or too ready to denounce the contributor.

Ltjg. Wucker is an F-14 RIO with VF-51, and is the squadron AME(PR) branch officer.

Slow Down the Chain

By Ltjg. Robert Coble

WE all remember those days in the training command when the instructor pilot had suited up, finished the preflight and strapped in by the time his student figured out where the plane was parked. No matter how fast you dressed or how early you walked, the instructor was always waiting on you with a scowl only a Marine could love. How many times after these flights did you go to turn in your gear only to find that you forgot to check out a PRC-90 or fasten the lower fittings of your SV-2?

Now that you're a seasoned aviator, you have the privilege of waiting on your partner and never being rushed into those bonehead mistakes . . . or do you?

Let's say you have the 1300 ACM hop and you have been going strong all morning to get through that stack of paper work lying in your incoming basket. After a thorough brief, you have a few minutes for a cup of coffee before you walk. As you're heading for the stairs, you're summoned for an "important" phone call. After 20 minutes of tap dancing for Capt. Perfect, you finally make it to the PR shop. No problem! You can easily make up the lost time while you suit up and during the preflight. As you slip into your gear, a couple of buds are in the loft unwinding from their flight. You find yourself the butt of most of their jokes and have to defend your good name. No time lost, in fact, you have made up five minutes.

During the preflight, you find a nick on one of the compressor blades, and the plane is down. More lost time. After preflighting the spare and scanning its discrepancy book, you quickly strap in and push to make your range time. Once airborne, habit patterns take over and you settle into an above-average hop. That is, until you land.

When you clear the runway, you try to safe your seat and find it was *never armed.* Good thing you didn't have to pull that handle.

After shutdown, you start to release your leg restraints only to see the fittings lying on the floor and no harness on your legs. You also notice that your lap belts aren't tight. Finally, while climbing out of the cockpit, you see a red flag flapping in the turtleback attached to the three canopy jettison pins that were never pulled. If anything had happened during the flight, you would have been a dead man.

Maybe it wasn't such a good hop, after all. We all get rushed occasionally, but we can't let events drive us. A couple of minutes saved is not worth your life. ◄

Ltjg. Coble is a RIO with VF-114.

"Hey, That's Not Our Ship!"

By Lt. Ken Solomon

IT was supposed to be a routine hop: go out as covertly as possible, and as far as our fuel gauge and SOP would allow, find everything that pulses and radiates, track it, report it and wait for recommendations from CIC.

The LAMPS MK III helicopter's avionics system includes a two-way, highly directional digital datalink that allows the host MK III ship and her helos to share mission information throughout the flight. The navigational relationship between the ship and helo is critical, and is automatically updated many times per second. If the link is lost, for any reason, the ship and helicopter lose this important information. Navigational errors result. One common LAMPS MK III mission that breaks the datalink is the one we were going to fly: low-level run-ins on contacts that were significant distances from the ship. This mission takes the ship and helo out of datalink communications for varying periods of time, without taking the necessary steps to update the system.

Initially, the flight went as briefed. We popped up at each CIC-generated fly-to-point (FTP), radiated and reestablished datalink communications with the ship. We also updated positional information at each FTP.

"Ops normal," we reported as we tiptoed our way to tactical stardom, "4+00 fuel remaining."

Our next FTP put us 75nm from homeplate. We were unable to establish communication until we reached 3,200 feet. Once we were able to communicate, I gave a quick call, then began a rapid descent back to our covert altitude of 50 feet.

We had been using a lot of fuel during the first 45 minutes of the mission. But, that didn't bother us. After all, at Mach 5 and 50 feet, the SH-60B will swallow some fuel. Not fully communicating with the ship at our last FTP didn't concern us, either. We had radar, ESM, lots of U.S. Navy ships in the vicinity, and, hey — we're Naval Aviators.

At 100 nm from homeplate, we climbed to 6,000 feet to reestablish link, and, vulnerable to detection at this altitude, made a quick call to the ship and dove for the deck.

At 125 nm from the ship, we had to climb to 9,000

At 35 miles from the contact we thought was our ship, with 1,300 pounds of fuel, we began descending through the cloud layer. We had enough gas for two hours of flight at max conserve.

feet. Once in link, the first words I heard were "Oceanlord 29, remain in link. I say again, do not break link." The interesting thing was that the voice belonged to my OINC.

During the chat with my OINC, it became apparent to us that our sierra hotel efforts at short, cryptic link checks had caused a slight problem: The error in navigational relationship had increased to 68 nm. By the time we understood the problem, we were at 10,000 feet and approaching 150 nm from home.

The OINC and I decided that the 68 nm difference could be solved by a DAME update. A DAME update repositions the helo to a spot decided by computers in the aircraft and the ship. In the midst of the update, our screen went blank as we were beamed into a parallel universe. At this point, we started to admit that, perhaps, things were a bit confused.

Although there were no known friendly contacts on our radar screen, we were able to raise our ship on UHF secure and finish trouble-shooting the datalink. We were not, however, able to correct the navigational error. Communications were also very weak, we were approaching bingo fuel, and night was beginning to fall. Does any of this sound familiar?

As we began to get a rope around the situation, CIC called on the secure UHF.

"Can you proceed south approximately 20 miles to I.D. a suspected contact?" Great. We're having trouble, bingo fuel is just around the corner, and CIC wants us to check out a contact. We declined and turned for home, minus one I.D.

As we headed for home at 7,500 feet, I checked my airspeed indicator, which showed 143 knots.

"Excellent," I thought, "at this rate, we'll be home in time for the third gala showing of 'Gold of the Amazon Women' in the wardroom." We continued at max range airspeed and worked on our dead-reckoning procedures until we got a radar contact at 110 nm.

"Got you on radar," I said, "there's a couple of contacts your way, but we're sure that the northernmost contact is you."

At 35 miles from the contact we thought was our ship, with 1,300 pounds of fuel, we began descending through the cloud layer. We had enough gas for two hours of flight at max conserve. We told CIC that if the ship wasn't in sight by 1,000 pounds, they were to light off the TACAN. As we passed through 4,500 feet, we lost all communications with the ship. I hoped that we would regain communications soon.

Rain showers and lowering visibility greeted us at 1,000 feet, and as the radios remained silent and the fuel meter continued its downward trend, our sense of foreboding increased. We sighted our radar contact and relaxed a bit.

"U.S. warship! Looking good." But our next call was less enthusiastic.

"Hey! That's not our ship!"

A few thoughts came to mind: I'm stupid, let's go I.D. the other two contacts in the area, and I'm stupid.

We headed for the next contact and found a false radar contact imbedded in a rain shower. Ten miles from the next contact, my sensor operator said, "Sir, this contact appears to be a false image, too. May I make a suggestion?"

"Let me guess," I said, "you want to go back to the first contact, the warship, and get some gas before we go feet wet."

"Yes, sir."

We turned toward our only gas stop, and I flicked on Guard. I declared low fuel and squawked 7700. The ever-present Hawkeye responded promptly. We requested a steer to homeplate.

"Steer 220 for 98 nm," the E-2 replied.

"Understand 98 nm?"

"Affirm."

"Roger," I said, "please contact my unit and tell them my position and my intention to refuel from USS *Boat* prior to RTB."

As night came and the rain showers continued, we requested a HIFR, and the ship responded. After we left with a pledge to buy everyone on the ship the sports car of their choice, we returned to homeplate, maintaining communication with the E-2 all the way.

Yeah, we learned plenty that flight. We took a lackadaisical approach to the entire mission and relied on the usually unflappable MK III avionics. We failed to react properly to indications throughout the flight, which might have helped us break the chain. ◄

Lt. Solomon is an SH-60 pilot with HSL-41.

You Look, Too

Our electric shop was tasked with a 56-day inspection on an A-6. An electrician was sent to pull the control boxes around the throttle quadrant (TQ). A QAR inspected the area and told the electric shop the aircraft was ready to go back together. I went out to CDI installation of the control boxes and noticed an ink pen under the TQ, which I removed.

On another job we were tasked to do a 224-day inspection on another aircraft. We pulled the boxes around the TQ and the panels around the control stick. The QA rep (same person) inspected the TQ and stick and said they were OK.

I went out to inspect both areas and found the bottom bolts and cotter keys installed incorrectly. The clamp to the control stick was installed wrong, and another clamp was missing, causing the wire bundle to rub on the bob weight of the stick. All discrepancies were corrected.

If you don't know a system or you're not sure, look it up. These are all safety flight items, and it's not the time to be kidding anyone, including yourself. Don't get into the habit of letting QA sign off without you checking. You look, too. Safety of flight needs your experience.

Playitsafemouse

"I Only Nudged It a Little"

It was late on the night shift, and we were getting ready to call it a night. Being a junior man, I got volunteered to take the trash out.

I put the trash can on the back of a tow tractor and headed down the flight line to the dumpster. Halfway there I hit a gaseous oxygen cart.

The thought that I didn't have a license or that I had violated a general order never crossed my mind. I told the ASDO about my accident and called it a night.

But the incident was not forgotten. I was called before captain's mast where I received a $50 fine and a rather healthy heart-to-heart talk from my chief. Fortunately for me, I was doing the posted ramp speed limit of five miles an hour, and there was no damage to the tractor, the gaseous oxygen cart or myself. So I got off rather light.

It has been quite a few years since that night, and now I'm a second class mechanic with 12 years of service. Yet, I think about it often. It was a real eye-opener. I knew better but just didn't think about what I was doing.

My attention wasn't fully on the task at hand. The cliche about having your head on a swivel really applies.

My supervisor should have made sure I had a license before allowing me to drive the tow tractor. Also, the gaseous oxygen cart that I hit had no reflective tape or reflectors on it. By the time I saw it, it was too late. But the bottom line is,

Let Anymouse Know. We encourage you to write Anymouse whenever you see "a mishap about to happen." If you know of a hair-raising situation in the air or on the deck, let Anymouse know about it. You may help someone else avoid an unsafe incident.

Anymouse is a unique department in Approach where no names are used. All information is anonymous. In fact, Anymouse was born three decades ago when someone couldn't spell "anonymous" and signed his letter "anymouse." Thus, a mouse wearing flight gear has become a worldwide naval aviation safety symbol.

Over the years we have found it is often more prudent and speedy to report unsafe situations anonymously. Keep in mind, though, that Anymouse is not interested in personality conflicts or non-constructive criticism of individuals. All views expressed are those of the writers and do not imply endorsement by the Naval Safety Center.

For your convenience, postpaid Anymouse mailing forms are available in most ready rooms and from most flight safety officers. Use of the form is not mandatory, though. Just jot down your thoughts and mail to Anymouse, Approach Magazine, Naval Safety Center, NAS Norfolk, VA 23511-5796.

as I told the skipper at mast, "I screwed up." I hope others will read this and learn from my mishap.

Smartermouse

• *This sounds familiar. How many times have we sat around and swapped sea stories about the one that got away or how close we came to death, and laughed about it? The operation of support equipment, whether on the carrier flight deck or at a naval air station, can be extremely dangerous. Why does it always seem to take so long for us to learn the basics.*

As supervisors, we must take the time to ensure only those personnel who have the proper training are operating support equipment. We must be certain a proper daily schedule has been performed, or we're just waiting for the above-mentioned scenario to reoccur. Instead of reliving history, let's make some. We should learn from those who preceded us and save all the pain, broken aircraft and damaged yellow gear. — ASCS Douglas A. Koenker, Support Equipment Branch, Aircraft Maintenance and Material Division, Naval Safety Center.

Traveling Heavy

The pilot had so much personal gear that bags were stuffed behind his seat in the rear canopy. More personal bags were stowed between the pilots on the instrument-panel glare shield.

So much for stowing loose gear properly to prevent FOD in the cockpit.

It was ironic that one of the pilots was the wing commander, and the wing safety office was pushing a big FOD-safety campaign. What about FOD carried by pilots who improperly stow baggage that could jam the flight controls or hamper emergency egress?

A fine example of "do as I say, not as I do." Safety comes from the top. Can't we get these officers in charge to practice what they preach?

Excessbaggagemouse

Smoke-Filled Aircraft

I have a serious problem. I'm a non-smoker. Most of the guys on my aircraft smoke constantly. I don't want to get the reputation of a complainer or whiner, but I care for my health and deserve a smoke-free work space.

COMNAVAIRPAC Instruction 5100.13 states there will be no smoking in the aircraft in places where there are non-smokers. No one in our squadron seems concerned about this issue.

It really affects my performance, morale and my health. The only way I can survive is to either change rating, get out of the Navy or hope that the Navy will ban smoking on *all* aircraft.

Smokedoutmouse

• *Section 709 OPNAVINST3710.7M states current Navy policy on smoking aboard naval aircraft. Among specific restrictions are during takeoff and landing, all ground operations, fueling operations including jettisoning and many others. The instruction states that "smoking shall be discouraged among flight crews." It also stipulates that commanding officers, subject to provisions of Section 709, "shall issue directives as necessary to govern smoking in aircraft." Instructions such as COMNAVAIRPAC Instruction 5100.13, dated March 18, 1987, entitled, "Tobacco Prevention Program for the Force," gives further policy clarification for this chain of command. All hands should be familiar with and adhere to these directives. — LCdr. John R. Wilhelm, Jr., formerly of the Aircraft Operations Division, Naval Safety Center.*

Whisper Tames the Tomcat

By Lt. John Price

. . . Just then, RPM on the right engine started to decay, ECS flow decreased, and I could hear the engine winding down . . .

PASSING through 8,000 feet, a warm feeling came over me. It wasn't the "warm and fuzzy" that we all joke about. My Tomcat was losing more than 5,000 feet a minute, and both of my TF-30 engines had stalled or flamed out. The sea surface temperature in W72A was 41 degrees, and there was still snow on the ground. At least my luck wasn't all bad; I'd worn my dry suit.

It had been a normal 1 v 1 hop against an A-4F. We were in the second engagement and decided to use "jungle tactics" and enter into a low-speed "knife fight." After meeting the slow bogey nearly head on, I pulled nose high into the vertical to reposition above and inside the bogey's turn.

Rolling, I positioned for lead pursuit (a cutoff). As airspeed started to increase and the bogey was flushing out in front of the fighter, I lowered the flaps, staying inside the bogey's turn. At the fleeting high deflection gunshot, I called, "Knock it off for fuel." My fuel state was 5.O, tapes were even, altitude was 13,500 feet and speed was 150 knots.

Leveling the wings, I raised the flaps and deselected afterburner. As the throttles came back, the left engine stall warning light came on and the stall tone sounded. I brought the throttles back to idle, hoping to clear a transient stall. RPM was still rolling back.

I quickly cycled the left throttle to off, then idle in an attempt to clear a sub-idle stall. As the left engine was winding down, with the right still running (4.8 fuel, tapes even), I shut off the left throttle, engaged the left engine crank switch and brought the right engine to mil power.

Things weren't all that bad, I thought. Being a PMCF pilot and having experienced engine stalls, burps and bangs before, I naturally wasn't happy to lose the left engine, but it was just a little drill, no excess RPM or TIT.

Just then, RPM on the right engine started to decay, ECS flow decreased, and I could hear the engine winding down. We were 230 knots, 12,000 feet. What not 10 seconds ago had been an enjoyable hop now became a nightmare. I pushed the nose over for airspeed, turned airstart on, and made my first informative call to my RIO, "I'm restarting the left."

Then we waited. The first 5,000 feet went by quickly as airspeed was building. The stick was mushy and stiff, and the emergency generator was kicking on and off. As we achieved 300 knots, electrical power stayed on and steady, and stick authority was almost normal. Reaching 310 knots, minimum air-start airspeed for the left engine, at 8,000 feet . . . Nothing!

Then came a radio inquiry from the bogey who was watching us plummet toward the water. My RIO responded with a firm "stand by," indicating that we were OK for the moment but busy!

If 310 knots wasn't working, we could hold that airspeed until sea

level minus six and never get a light off. So we pushed for more knots (now 20-25 degrees nose low). Passing 5,000 feet, my RIO called "platform" and started counting down altitudes. I had decided that at 2,500 feet I would call it quits, level off and jettison the airplane. The RPM started to increase — light off! We had good left engine response by 3,500 feet and bottomed out at 2,700 feet. On climbout, the right engine (cross-bleed) started. We flew on to a normal landing at homeplate.

Looking back on our experiences, four points come to mind:

1. I had complete confidence in my RIO and was certain he wouldn't eject me while I still had a reasonable chance to save the jet. He obviously trusted me enough to stay with me during the "comm-out" periods. If ever again, I would want to keep my RIO better informed. From lack of information, he could have made a good decision to do the inappropriate thing.

2. If we had called "knock it off" (high AOA, low airspeed) at 10,000 feet, there wouldn't have been enough altitude to trade for knots (a good plug for a maneuvering ROE).

3. What if we hadn't been wearing our "bags"? That warm feeling we spoke of could have quickly become a very cold feeling.

4. The F-14A with TF-30 engines has a very forgiving air-start envelope. If we had been in an F-14A "plus" (with the same fuel/feed system that caused the whole problem) and no APU, there would have been no air-start.

We were lucky. We had the misfortune to lose both engines, but we had in our favor sufficient altitude, enough systems training, necessary operable equipment and good preflight planning. ◄

And, it would appear, great crew coordination! — Ed.

Lt. Price is an F-14 pilot with VF-31 at NAS Oceana, Va.

A Midair In One Act

By Cdr. B.R. Allen

The Scenario. A major west coast exercise involving Navy, Marine Corps and Air Force units with the task group working west of San Clemente Island. Separately, a section of F-4s and a B-52 are to simulate attacks on the task group. At San Clemente Airfield, a C-12 is making touch-and-go's, and a C-9 is in the GCA box pattern. There is an 1,800-foot overcast, and the visibility is seven miles.

The Plot. The task group, instead of being west, is now northeast of San Clemente at *five* miles. The B-52 is southwest of the island, expecting to go northwest; but it now must transit northeast, across San Clemente, below the overcast, to reach the task group. Meanwhile, the F-4s are entering the warning area from the northeast en route to the ship, which is southwest of San Clemente. The Phantoms report a sweet lock on the ship's TACAN and are cleared inbound at 2,500 feet.

The Plot Thickens. Aboard the ship, the controllers plotting the B-52's flight path request the Helicopter Direction Center (HDC) call San Clemente Tower for permission for the aircraft to transit the island's control area between 500 feet and 1,500 feet. Five minutes later, tactical air control personnel asks HDC to confirm approval. HDC calls San Clemente Tower; the same voice answers, repeats and confirms the request is approved. Meanwhile, the F-4s are still inbound toward the ship. Their controllers express concern that the F-4s' flight path will pass close to San Clemente Airport, and instruct the Phantoms to maintain VFR and climb to 4,000 feet. The F-4s say that they are VFR at 2,500 feet and that the climb would place them in the overcast. The Phantoms report seeing traffic near the airport.

As all targets converge on San Clemente Airport.

Ship (to tower): Be advised, there are going to be some fast movers . . . coming through your airspace, 500 feet and above, over.

Tower: Roger.

Ship: . . . Understand you copy?

Tower: Roger.

Tower (to C-12): Traffic ahead and to your left is a fast-moving low jet not in contact with the tower.

C-12: Negative contact.

Ship: Estimating the time overhead for the fast mover in three minutes.

Tower: He just passed overhead.

Ship: He'll be departing.

C-12: Tower, he just missed (us), we had him the last second there.

Tower (to C-12): We just spotted the other fast-moving jet through the airport traffic area.

Synopsis. Within a three-minute period, within the confines of the San Clemente Airport, a C-12 in the left downwind at 1,200 feet, and the F-4s, who were supposed to be VFR at 2,500 feet, experience a near midair. A B-52 crosses the runway perpendicularly at 380 knots at 900 feet AGL in front of a C-9 on final approach at one mile.

Lessons. A situation like this offers a chance for a lot of finger-pointing. However, let's look at some rules of the road that could have prevented this incident.

— When told to maintain VFR, you are not cleared through airport traffic areas (controlled airspace).

— "Roger" means you understand; it doesn't mean approved.

— Don't approve flight evolutions that conflict with traffic under your control.

— When making "routine" approaches, expect the unexpected.

— When conducting routine flight operations in the middle of a major exercise area, keep your head on a swivel. The Big Sky theory is invalid.

—The last time you talked on the radio, did you "tell" or "ask"? Was your request "approved" or "rogered"?

Develop situational awareness. Whether on the ground or in the air, know where you are, what's going on, and how it will affect your operations. Use standard phraseology. Slang or jargon add confusion to communications. ◄

Cdr. Allen was the XO of Tactical Air Control Squadron 12 when he wrote this article. He has since retired.

The First One Counts

By LCdr. Arthur R. Porcelli, Jr.

. . . Dash 3 radioed, "402, your tail rotor is not spinning." Now I knew we had a real problem, a helo pilot's nightmare . . .

THREE SH-60Bs were returning from a weekend cross-country training flight. We were Dash 2. The right seat fleet replacement pilot (FRP) flew the first hour in loose trail. Then I took the controls to demonstrate a parade position. Center had us climb from 4,000 feet to 5,000 feet. We dropped back to a loose trail and trimmed up the Seahawk for "George" to fly.

It seemed that our yaw trim servo couldn't maintain heading; the ball slowly started drifting to the left. As I tried to retrim with cyclic and pedals, the yaw to the right increased in speed and magnitude. I had already applied full left pedal, but the yaw continued at about 60 degrees.

I applied full down collective to enter an autorotation. Dash 3 radioed, "402, your tail rotor is not spinning." Now I knew we had a real problem, a helo pilot's nightmare!

My training and instinct took over. Once established in the autorotation, my copilot began the emergency landing checklist. NATOPS emergency procedure seemed vague. I tried to autorotate the tail rotor twice. Both times as power was slowly applied, the helo began to yaw to a point that I was unwilling to accept.

We were at 2,000 feet, and I looked for a safe landing site. We transmitted a Mayday. Dash 1 also sent a Mayday signal and was going to follow us down. Dash 1 advised us when our tail rotor was spinning and when it wasn't.

My copilot sighted a large field to our right. I picked this spot for our landing. We did a controlled descending turn as we approached it. Doing a practice autorotation to NAS Homefield, where visual references to judge drift, ground speed and rate of descent are available, was not the same as autorotating to the wide open, barren field we were approaching. The wind was light and variable and wouldn't be a problem. I set up along the edge of the field, where I spotted a fence and a road that I could use for visual reference.

At this point we flew normally in an uncoupled descending right turn, just like a practice autorotation. Over our landing spot, I rolled wings level at 1,000 feet. My scan shifted from Bar Alt to Rad Alt, and I called for the engines to be secured. Think about that for a second: asking your copilot to shut down all engines at 1,000 feet. It got very quiet.

Now things happened fast. I was in complete override. From the time the engines were secured to 50 feet, the descent was just like a practice autorotation. From 50 feet to the ground, however, it was completely different. From our near zero rate of descent and zero airspeed position from 50 feet to touchdown, it seemed to be an instantaneous rock and pull.

Imprints in the field showed our tail bumper hit the ground first and absorbed some of the impact, followed by the tail wheel and then the main mounts. When the main mounts hit the ground, the right main mount caught in the sand and sheared, causing our helo to come to rest on its right side. After all motion had stopped, the battery was secured, and everyone exited the helicopter.

Dash 3 landed nearby, and Dash 1 was circling overhead. I ran to Dash 3 and spoke to Dash 1 on the radio to report no injuries. Dash 1 was in communication with center.

Assisted by local town police and the fire department, we secured the area around the SH-60B, and left crewman from Dash 1 and 3 to maintain a security watch. The helos flew us home. It seemed like a very long day.

My first helicopter flight instructor said, "The first autorotation of the day will always be the one that really counts." How true. The day you have to make a real autorotation, you get only one chance. ◄

LCdr. Porcelli flies SH-60s with HSL-42, based at NAS Mayport, Fla.

PH2 Dave Loveall

Left to right: AW2 Dave Gregorio, LCdr. Rich McNeil, Ltjg. Chas Shults

LCdr. Rich McNeil
Ltjg. Chas Shults
AW2 Dave Gregorio
HSL-34

During the transit for Med Cruise 3-88, HSL-34 Det 1 was conducting night deck landing qualifications aboard USS *Connole* (FF-1056). The detachment's aircraft, Greenchecker 235, was manned by LCdr. McNeil (HAC), Ltjg. Shults (copilot) and AW2 Gregorio (SENSO).

Ltjg. Shults had completed two night landings, taken off and was climbing through 300 feet, when the aircrew heard the sound of engine fluctuations. LCdr. McNeil took the controls and noticed that rotor speed (Nr) had decreased. No. 1 engine torque dropped to zero, and No. 1 power turbine speed (Nf) had increased and frozen at 107 percent. No. 2 engine power had increased. All other instruments indicated normal. The crew declared an emergency, turned toward the ship and completed immediate landing/ditching procedures.

Faced with cockpit indications that are not specifically covered in NATOPS, the crew prepared themselves for a night, single-engine landing based on the low Nr. After the H-2 turned onto a 2 nm final, the combined gearbox (CGB) oil pressure dropped abruptly to zero while CGB oil temperature rose above red line. The CGB oil pressure caution light illuminated, and the crew felt increased vibrations throughout the airframe. They were now confronted with compound emergencies calling for two distinct flight profiles — one steep, one shallow.

LCdr. McNeil descended from 300 feet to 75 feet, and slowed to 50 knots, choosing an approach profile combining single-engine and CGB-loss-of-oil pressure procedures. While Ltjg. Shults provided altitude and airspeed information, AW2 Gregorio gave range inputs to LCdr. McNeil, thus reducing his workload and enabling him to concentrate on critical Nr and landing the helicopter.

As the H-2 approached the ship, vibrations steadily increased and flight controllability worsened. With the rotor speed starting to rapidly decay, LCdr. McNeil landed safely aboard *Connole* as Nr dropped below 100 percent.

Postflight inspection revealed that a snap ring within the combing gearbox had failed, allowing the engine to become disconnected from the transmission system, causing this single-engine scenario even though the aircraft had two "good" engines.

BRAVO ZULU

LCdr. John Bell
Lt. Robert Tauriainen
AD2 Jeffrey Willis
AMH2 Harry Cassel
HC-1

Shortly after the SH-3G launched with nine passengers to begin a week-long detachment, the No. 2 engine fire T-handle illuminated. LCdr. Bell (PAC) declared an emergency and immediately turned the aircraft back toward NAS North Island. AMH2 Cassel (first crewman) visually confirmed the fire by smoke and flames coming through the overhead, and AD2 Willis (aircrewman) reported trailing smoke outside.

While LCdr. Bell set up for a roll-on landing, Lt. Tauriainen (PIC), did the NATOPS procedures for in-flight engine shutdown and fire extinguishing.

When he saw the aircrewman preparing the raft for a possible ditching, one of the passengers unstrapped. However, AMH2 Cassel quickly reseated the anxious man.

After a safe landing and emergency shutdown, the passengers and crew exited the helicopter. Smoldering electrical wiring caused a fuel reflash in the No. 2 engine compartment. Using the portable fire bottle, AD2 Willis immediately extinguished the second fire.

Inspection indicated that the original fire resulted from a leak in the engine fuel manifold. The incident is still under investigation.

The passengers received a proper preflight brief, including emergency procedures. However, with reality staring them in the face, at least one passenger apparently forgot what he had been told. The passengers were newcomers to the squadron, and many had been in the Navy a short time. Unfamiliarity with their new squadron in general, and with flying in particular, may have set the stage for in-flight panic. — Ed.

Left to right (back row): LCdr. John Bell, Lt. Robert Tauriainen,
Front row (left to right): AD2 Jeffrey Willis, AMH2 Harry Cassel

PHAN Kolas

Capt. Jeffrey D. Geyer, USMC
VMFA-333

Kiser 56, an F/A-18A Hornet, launched on a night, air superiority, strike-support mission. Capt. Geyer was scheduled for pre-strike aerial refueling 120 miles east of MCAS Beaufort. He rendezvoused with the KC-130 tanker and plugged. After receiving his fuel, Capt. Geyer backed away from the tanker's refueling pod, but 80 feet of hose separated from the tanker. With the refueling drogue still firmly attached to the Hornet's refueling probe, Capt. Geyer suddenly felt the slam of the hose against his windscreen and the right side of his aircraft. There was a gush of fuel that obscured his vision, followed by a master caution light and an "Engine right! Engine right!" voice alert.

Capt. Geyer quickly assessed the situation, secured the right engine, declared an emergency and began his divert to Beaufort, with the KC-130's refueling hose flailing around his aircraft. With help from the LSO, Capt. Geyer made a night single-engine arrested landing.

Postflight inspection revealed that the drogue remained on the Hornet's probe, with 44 feet of hose. The hose was impaled on the right pitot tube and trailed down the right side of the F/A-18. The missing 36 feet of hose is believed to have been cut when it struck the left vertical stabilizer.

Left to right: AD2 Dan Erb, Ltjg. Tom Kennedy, LCdr. Doug Berg, AW2 Dan Blejski

LCdr. Doug Berg
Ltjg. Tom Kennedy
AW2 Dan Blejski
AD2 Dan Erb
HSL-33

LCdr. Berg (HAC), Ltjg. Kennedy (copilot), AW2 Blejski (aircrewman) and AD2 Erb were flying an SH-2F LAMPS helicopter in support of Earnest Will operations in the Arabian Gulf. They had already flown a three-hour sortie, hot-refueled on deck, then launched for another three-hour hop. The crew began to notice hydraulic problems toward the end of the second flight.

Both pilots felt a jolt in the aircraft, most notably in the flight controls. A quick scan of the gauges showed no particular deviations from normal until a second jolt occurred. At that time, the helo lost hydraulic boost and the automatic stabilization equipment (ASE) to the flight controls.

Ltjg. Kennedy was monitoring the gauges and reported that the hydraulic gauge went from 1550 psi to 0 psi and remained there after the second jolt. The crew determined that the hydraulic pump had failed or a line had ruptured.

LCdr. Berg maintained control of the helicopter by beeping down to 102 percent Nr and used the trim motors to manipulate responses to the flight controls. Meanwhile, Ltjg. Kennedy referred to the NATOPS Pocket Checklist and read the emergency procedures to the crew. The crew declared an emergency, and USS *O'Brien* (DD-975) maintained best winds as delineated in the wind charts for boost-off approaches. LCdr. Berg positioned the H-2 for the approach and directed the crew to lock their harnesses and prepare for a possible ditching.

With the helicopter on final, Ltjg. Kennedy assisted LCdr. Berg by maintaining an inside scan and calling altitudes and airspeeds. LCdr. Berg concentrated on the visual approach and flying the helicopter despite its degraded state. He recovered safely aboard *O'Brien*.

Postflight inspection revealed two ruptured hydraulic lines.

The SH-2F is the only helicopter that can fly with zero hydraulic fluid. Shooting an approach and completing a safe landing aboard a destroyer with no hydraulic-boosted flight control input fully deserves a BZ for this crew. — Lt. Scott Campbell, H-2 analyst, Naval Safety Center. ◄

I Learned the Hard Way

By Lt. Mike Helwig

. . . I knew what NATOPS said, and I knew what the PCL (pocket checklist) said, too. The fact that they were different made me nervous. . .

LATE September in the Indian Ocean, I was scheduled to fly a 2 V 2 against a couple of A-7s. We were assigned aircraft 201, the Christine of the squadron, aptly named because it spent much time on the hangar deck. Our Tomcat had flown just a few times since a total environmental control system (ECS) failure, but I didn't expect any problems and was confident in my ability to handle any contingency. I was on my second cruise with 700 Tomcat hours, and my pilot was a seasoned lieutenant commander.

During the rendezvous after our first engagement, my pilot reduced power for a join-up. The cooling air light illuminated on my caution/advisory panel. No problem; how many times had this happened before? I told my pilot to check our cabin pressure, and he replied it was fine. Our G-suits were working normally (and continued to work well during the next engagement), so I wasn't concerned. In fact, the light went out when power was added.

We completed another intercept to engagement and were returning to our station when the ugliness began. It started with a loud bang on my right side. Even before the cockpit started filling with smoke, we both suspected our ECS turbine had malfunctioned. The emergency worsened until my pilot could no longer control the aircraft. We were forced to eject. Yet, we were back on the boat in half an hour.

Over the next several days, I repeated this story many times. As I did this, several warning buzzers and bells were ringing in my head. Did I do something wrong? I knew what NATOPS said, and I knew what the PCL (pocket checklist) said, too. The fact that they were different made me nervous. I had followed NATOPS procedures regarding an illuminated cooling air light, but I had not followed PCL procedures, which were more cautious in their approach to a cooling air light. Would the aircraft mishap investigation board find fault with my actions?

The board did and I was furious. I believed the cooling air light was commonly regarded as a nuisance light and routinely ignored. Cooling air lights along with reduced power were fairly common. They usually went out when you added power. Even the two RIOs on the board admitted they would have done the same thing. I hadn't informed my pilot that I had a temporary advisory light, and I got some flack from the board on this.

Since then, I've had some time to think about the whole incident, and some of my opinions have changed. First, I thank the Lord that we survived the ejection. Some aircrews have not been so lucky. Second, no matter how I justify calling the cooling air light a "nuisance," I chose to disregard PCL procedures (even though I followed NATOPS procedures). Would taking the more conservative approach and immediately securing the air source have saved the plane? Maybe and maybe not. Hopefully, others will learn from our mishap.

I have learned the hard way about NATOPS. If for some reason conflicting trouble-shooting procedures emerge, be safe and opt for the most restrictive one. Unfortunately, not everyone does. We still give each other a lot of grief for not taking a jet, which would probably fly perfectly well but is down according to NATOPS or SOP. If NATOPS or SOP says the jet is down, the jet is down. If you don't like it, change NATOPS. Otherwise, you may end up reading about yourself in a mishap report. ◄

As a result of this mishap and MIR recommendations, procedures in both the NATOPS and PCL were totally rewritten and incorporated. — Ed.

Lt. Helwig is a RIO flying F-14s with the VF-111 Sundowners, based at NAS Miramar, Calif.

NATOPS Checklist Revisited

By Cdr. Bob Willard

I WAS flying a night case 3 approach to the boat. During the cycle, the angle-of-attack indicator had fluctuated randomly. I suspected that it could not be used for landing.

Aside from a nuisance flap light that remained on, everything else seemed to work. At 1,200 feet and eight miles, I prepared to land. As the F-14 decelerated, I automatically broadcast the landing checklist.

Decelerating through 160 knots, I noted 15 units (on speed) angle of attack. Computed speed was 138 knots. I concentrated on flying the final bearing and setting up for my final approach.

I first realized something was wrong when I sensed the onset of light buffet at just under 150 knots. The Tomcat "felt" like the indicated AOA of 19 units was correct and that I was approaching wing stall! I added power to stabilize things and asked my RIO what his airspeed indicator read. When he answered 9 knots less than my indication, I felt better. But that was still higher than computed speed, and the jet was flying as if it were on the edge of a stall.

I again checked my gear and flaps down, boards out and DLC engaged. I glanced back to verify that the leading edge slats were down and decided the problem must be with aux flaps. Remember the nuisance flap light? I checked wings to auto and depressed the master reset, then added power and cycled the flaps. I was now on final approach, trying to stabilize the needles and decelerate closer to my RIO's speed indicator. It wasn't the best way to start an approach on a dark night.

. . . Approaching one mile on final, I was still confused by the higher-than-normal speed indication and my difficulty in stabilizing my rate of descent. . . .

I intended to cross-reference the questionable AOA indicator, but not necessarily believe it. I would look at my airspeed indication and my RIO's, then rely on the LSO to judge my landing attitude. Approaching one mile on final, I was still confused by our higher-than-normal airspeed indication and my difficulty in stabilizing my rate of descent.

I had enough! I waved off and broadcast that I was taking it around to trouble-shoot a problem with airspeed and AOA.

After climbing to 2,000 feet downwind, I still thought the problem was mispositioned aux flaps. The nuisance flap light was the only indicated malfunction. I suspected the AOA indicator and knew that there was a disparity between the front and rear airspeed instruments.

Then I saw it! A small strip of Velcro was dangling across the top of my wingsweep indicator. I lifted it up and, lo and behold, my wings indicated 30 degrees, not 20! In auto, they would not sweep forward of 30 degrees. I had to position them to 20 degrees, using the emergency control handle to allow the aux flaps to come down and get the airspeed under control.

What a Delta Sierra! We overlooked a fundamental step in the landing checklist, the root of the problem. After we trapped safely, I shuddered at what could have been, had I continued the first approach to touchdown. I was lucky enough to discover it's never too early or too late to revisit the basics. ◄

Cdr. Willard is executive officer of VF-51, an F-14 squadron homeported at NAS Miramar, Calif. He has been a RAG instructor, Top Gun instructor and was the anonymous MiG pilot in the movie, "Top Gun."

Last Flight of

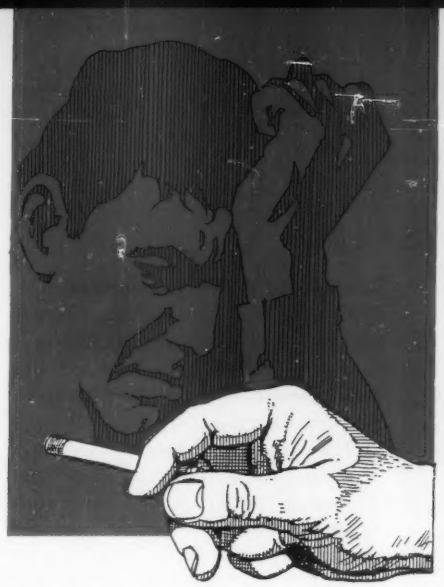
By LCdr. J.J. Horvath

("Smoking Passenger Causes C-9 Mishap" — Does this sound like an impossible headline? Well, it's not! Investigation of a fatal Air Canada C-9 mishap indicated that a fire started in the aft lavatory by a smoking passenger and quickly spread through the cabin. Military C-9s are not immune to this hazard. In fact, recent hazard reports document several instances when Navy flight crew attendants discovered cigarette butts in the wastepaper bins in the aft head. Also, the smoke detectors were found to have been deliberately disconnected. Previous legs of the flight were less than two hours, thus meeting the FAA's criteria for a designated non-smoking flight. The U.S. Navy is deadly serious about putting an end to this problem. It has been recommended that future violators be prosecuted to the fullest extent of UCMJ (Uniform Code of Military Justice) and federal law. Under the UCMJ, this may result in a dishonorable discharge, forfeiture of all pay and allowances and confinement for two years. Under federal law, this may result in a $2,000 fine for each violation. The following article is fictitious; however, it illustrates what can happen. By adhering to Navy regulations and federal statutes, "Last Flight of the Memphis" will not become an actual headline — Lt. Ken Underwood, C-9 analyst, Naval Safety Center.)

"The City of Memphis," a C-9B, began its takeoff roll after a 70-minute ground delay. The pilot discovered a sluggish nosewheel steering system as the aircraft began to taxi to the active runway. The return to the transient line, trouble-shooting and servicing of the system took 50 minutes. The remainder of the delay involved waiting for takeoff clearance through the flight center. The passengers remained on board the entire time because of the uncertainty of repair time.

The takeoff and climb-out on this 90-minute flight could not have been smoother. Perhaps a little of the delay could be made up en route if the winds were lighter than predicted. The pilot extinguished the fasten-seatbelt light a few thousand feet before level off. The no-smoking light remained illuminated. Arrival at FL 350 went unnoticed by the flight attendant crew members who were busy serving coffee, sodas and snacks to the passengers.

In seat 20 D was a 22-year-old seaman who was en route to "A" school. Although he'd only been in the Navy for 10 months, military air travel was not new to him. The young SN hated flying though, because usually he couldn't smoke a cigarette. On this particular flight, it had already been more than two hours since he last smoked. He'd never gone that long between cigarettes for as long as he could remember. His craving intensified the more he concentrated on it until the need overpowered reason. He went to the aft head, secured the



the Memphis

door, removed the battery to the smoke alarm and lit a cigarette.

It took a full three minutes to finish the cigarette. Satisfied, he crushed the end in the sink, threw the butt into the wastepaper bin and rinsed the sink of ash. As he was waiting for the smoke and smell to clear from the room, someone knocked on the door. Quickly, he flushed the toilet, waved his arms to further dissipate the smoke, replaced the smoke alarm cover and opened the door. To his relief it was an airman standing before him instead of a curious flight crewman. Returning to his seat the seaman felt comfortable again. It was then he remembered that the smoke alarm battery was still in his pocket.

One hour away from its destination, "Memphis" encountered a front that produced mild turbulence and caused the pilot to turn on the fasten-seat-belt light in the cabin. Everyone, including the flight crew members, returned to their seats.

The first sign of trouble was the faint smell of burning paper in the aft part of the cabin. The smoldering cigarette had spread its ember to wastepaper in the bin and within moments had burst into flame. By the time the volume of smoke and odor had built to the level where passengers became concerned, the intensity of the fire had ignited the fiberglass and wood structure producing an acrid, black smoke.

The first crewman to the scene opened the door and was quickly overwhelmed by the smoke. He stumbled forward away from the rapidly expanding fire. Panic set in as those passengers in the aft section unstrapped and tried to move forward. Their movement hindered the efforts of the other crew members who were trying to move aft with portable fire extinguishers.

The fire continued to spread. It quickly jumped to the main cabin, igniting the fuselage covering, fiberglass overhead compartments and seat cushions. Although the crew was able to finally apply CO_2 and Halon to the flames, it wasn't enough. The smoke and heat drove them away from the aft head.

In the cockpit the pilot and copilot donned oxygen/smoke goggles as a precaution. An emergency was declared, and Center directed the C-9 to a municipal field 50 miles to the northwest. The pilot began a rapid descent to 9,000 feet while the copilot set the cabin pressure to 10,000 feet in an effort to remove the cabin smoke.

The crew chief expended the last extinguishing agent available when the aircraft was still 28 miles from touchdown. It was only enough to force the fire to retreat to the last row of seats. The remaining flight crew members where working feverishly in the cargo area to resuscitate five passengers who had fallen victim to smoke inhalation. Most passengers were now seated in the forward rows immediately behind the cargo. The pilot chose not to activate the emergency oxygen system in the cabin for fear of feeding the fire from the lines that ran to the aft section.

On touchdown the fire had claimed four rows of seats on both sides of the aisle and had burned a 4-inch hole through the top of the fuselage. The torch effect was starting to take place as outside air rushed in to fan the flames. As the aircraft rolled to a stop, the passengers had already removed the overwing exit doors, and the crew chief had opened the forward door. Evacuation of the aircraft was swift, but there were injuries. Four passengers never made it. They had already died from smoke inhalation.

Crash and rescue personnel arrived to find the smoke pouring from the exit doors and the surviving crew and passengers out of the aircraft and on the side of the runway. It took four minutes to douse the fire and remove the bodies.

The investigation never was able to establish who was responsible. The final toll was four dead, seven injured with broken bones and cuts from evacuation, and a C-9 that will never fly again. All for the want of a cigarette.

LCdr. Horvath is training aircraft analyst in the Aircraft Operations Division, Naval Safety Center, NAS Norfolk, Va.

Dumb Luck

By LCdr H.C. Kreitlein

AFTER 18 relaxing months at PG School, I was back in the E-2 FRS as a CAT II NFO. Although I was a little nervous about having instructors watching over my shoulder, I did not think I'd have any problem getting through the abbreviated syllabus before going back to the fleet. After all, I was a fleet aviator with two Westpac cruises under my belt, over 100 traps and lots of solid operational experience. I was ready for anything.

My first flight was as an observer on a NATOPS check flight for a CAT I student. I spent most of the flight listening to the questions and the student's answers. I was impressed with his responses. I had forgotten a lot of the information a long time ago. I started to get nervous.

Finally, the instructor began the emergency drills. I was sitting in the air controller's position, which is where the emergency walk-around oxygen bottle is located. While conducting the fire-of-unknown-origin drill, the instructor turned to me and asked for the oxygen bottle. The drill's scenario had a blazing fire in the forward electronics compartment. An E-2 in Norfolk had recently experienced such an emergency. (Check the March 1989 BZ column — Ed.)

The student had the CO2 bottle and was waiting for the oxygen bottle so he could go forward and put the fire out. Unfortunately, I was not giving much help. I fumbled around trying to disconnect the bottle from the bracket, but I couldn't find the release lever.

Desperately, I unstrapped from my seat and got on my knees. I stared at the bottle in the dim light, trying to figure out how to disconnect it. I had my gloves on while I stroked the bottle feverishly looking for whatever was holding it. I was very embarrassed, and I tore my gloves off and went back to work.

I finally gave up and admitted to both the instructor and student that I did not know how to get the bottle off the fuselage wall. Meanwhile, the imaginary fire had burned us all to cinders.

I was relieved to never hear about the incident again. Nevertheless, I did some serious thinking about it. I was angry with myself for not knowing how to do such a simple, yet important, thing. I was also amazed at how I had made it through a three-year tour in the aircraft without knowing the procedure. I had not forgotten how to get the bottle down; I'd never known how in the first place!

The logical, though disturbing, conclusion was that I had never been prepared for the emergencies that required using the bottle, nor for any emergency. Despite all the lip service I had given to safety and knowing NATOPS, I don't think I ever seriously considered what I would do in an emergency. It was probably just dumb luck that I was still alive.

Now I am back in the fleet again, although this time, I have a much greater respect for what I should know. At the first safety 'stand-down, I had each of the aircrews go through an emergency drill that required them to release the oxygen bottle and go forward with it to fight an imaginary fire.

The big question now is what else have I overlooked? Will I make it safely through this tour without needing to know something I have been too lazy to learn? I don't believe I am alone. We stand up and brief the emergency of the day before a flight while we rattle off the memory items. We must practice emergency procedures as often as we can while making the drill as realistic as possible.

Saving your emergency procedures drills for the yearly NATOPS check is not good enough. Practice should be an integral part of every quarterly safety stand-down. Sit in the aircraft with an observer and have him call out a scenario while you react. Debrief your mistakes. If something doesn't make sense, discuss it. Or if a procedure needs to be changed, submit a change recommendation. ◄

LCdr. Kreitlein is the safety officer for VAW-117.

The Generals Are Missing!

By Capt. Charles M. Schlom, U.S. Army

WE were to pick up three generals from the Italian Army Alpine Corps and take them to several field sites. This was my first REFORGER (Return of Forces to Germany) exercise, and I was flying with one of the unit's more experienced pilots. The weather was unusually clear for central Germany.

Don, the PIC (pilot in command), and I strapped on our UH-1 Huey, hovered over to the VIP pad and linked up with the Italian generals' escort officer. He gave us the manifest and the grid coordinates to the field sites the generals would visit. We were soon airborne. We stopped at different field locations to let them observe our hard-charging Army units in action.

We then proceeded to the last field site before lunch where our passengers got off, hopped into a waiting Jeep and drove away.

The escort officer said they would return in an hour. We told him that we would use the time to refuel at Graffenwhor Army Airfield and would meet them all back at our present location in an hour.

As luck would have it, everybody and his brother were tanking up at Graffenwhor, and we would be late getting back to our field site. We made up most the lost time in the air, and after landing at the pick-up point, it turned out we were only a few minutes late. The escort officer ran up to our Huey.

"They're gone," he cried, "and I don't know where they went! They never came back."

Don and I looked at each other as I wondered how this poor captain was going to explain to the Italian Minister of Defense how he had lost three of his generals. Don told the now ashen-faced, soon-to-be-ex-captain to get in and that we would try to locate them.

We spent the next hour across the Bavarian countryside, jumping from field site to field site in search of the missing generals. Finally, we found a soldier who knew where they were. He pointed in the direction of a small town about 10 kilometers away.

Looking at our map, we figured the quickest route was to fly down a river, which led directly to the town. Flying at low level above the trees, I looked at our wire-hazard map to see if any high-tension wires crossed the river. I didn't see any. Soon we were at our destination but became distracted as we began to look for two things: a suitable place to land and any military operations in the town that might guide us to our generals. Suddenly, out of the corner of my eye, I saw the silver glint of a power line tower off to our left. I began to search for the power lines when I saw them directly in front of us, partially hidden by the backdrop of trees and rising terrain.

"Wires!" I yelled.

Don hauled back on the cyclic and zeroed out the airspeed as our UH-1 came to an out-of-ground-effect hover, just 40 feet from the wires. We then found a suitable landing area and recovered our lost generals (who were dining with some national guardsmen and having a great time).

We learned some very valuable lessons that day.

- Don't become so distracted about accomplishing a mission that you forget about aircraft control and possible hazards along your route of flight.
- When flying in unfamiliar areas, study the maps. At least you will be able to determine ahead of time suitable landing areas and possible hazards to flight — like wires!
- Cockpit coordination. Let the pilot fly the aircraft and scan ahead for obstacles. The copilot can search for suitable landing areas and navigate. If additional crew members are aboard, use them. An extra pair of eyes looking out can never hurt.

Ciao, piasanos!

Capt. Schlom is with the Department of Plans, Training, Mobilization and Security/Aviation, U.S. Army Garrison, Fort Huachuca, Ariz. Previously he was stationed in West Germany with the 62nd Aviation Company, 11th Aviation Battalion, 12th Combat Aviation Group during REFORGER 86.

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Snakes and Shadows

. . . Once in the air, operating without tough wing fixes that have cured most wing-and-slat problems, a second snake cropped up. The slats had locked out, and the wings were not responding to pilot input. . . .

By Lt. John R. Weidman and Lt. Chip King

WE were scheduled to work with a wingman from our sister squadron on new rules of engagement (training rules). We were eager to fly on this clear night in the Mediterranean, but it took forever to get our F-14 to cat 2.

As we spread the wings, our first snake appeared. It was a small garden variety that forced us to spin off the catapult and do some wing wrestling. After encouragement from our flight deck chief, we were taken to the cat with our wings spread.

Once in the air, operating without wing fixes that have cured most flap-and-slat problems, a second snake cropped up. The slats had locked out, and the wings were not responding to pilot input. We called our rep, a well-trusted department head who had the knack of finding the right button to push. We had our wingman join to confirm the flap position as we went dirty.

Suddenly the shadow appeared. We were so involved with the wing problem and our rendezvous that an A-6 passed overhead close enough to create a shadowy figure on a moonlit night. We got a barely intelligible call out to warn our wingman, and we dumped the nose hard and to the left while selecting afterburner. Once everyone settled down, we kindly asked our controller if he had seen the traffic. The briefing chart on TV had shown us all alone in our sector.

After wrestling with the wings, it was close to marshal time, so we headed for our holding pattern. Before we could catch our breath, snake No. 3 appeared, a cobra. As the radio was being keyed to call "established," a flash of flickering red light silenced the report. The ensuing ICS came quick and direct. The engine with the fire light was at idle, air source off and the light out. The throttle was staying there.

It was good that all our instructors hammered into us to have a pocket checklist ready at all times. After reviewing the boldface and completing the rest of the fire-light items, we called for an emergency pull forward and our trusted rep. It was the only time in two cruises that we were assigned to the top of the stack. With the urgency to pull forward, we did our talking on marshal frequency to the dismay of some of the senior aviators sharing the frequency.

In our descent, we reviewed our situation with the rep and were satisfied with our outlook. Our goal was

to get on deck ASAP; yet, we were still concerned about repeating a previous F-14 mishap when a single-engine aircraft stalled trying to level off at 1,200 feet. Our shallow descent took us to three nautical miles at 3,000 feet. Trying to avoid a high, fast pass, we took a 360 to a good start and an OK-3.

Over sliders, we rehashed how well the snakes were beaten down and shadows avoided. There were several good learning points:

- Be wary of last-second fixes to make a sortie. Keep up an outside scan during emergencies, even when the airspace is "all yours."
- Thinking through game plans for emergencies allowed us to concentrate on the emergency and what advice our rep had to offer.
- Don't press on from a high, fast start just to avoid embarrassment. Our fear of high sink rates with one engine at idle should have been tempered with arriving at a good start the first time.
- In our ready-room discussions, we found that most pilots would have brought power up on the idle engine during the final approach. We leave it as something to consider that is not covered in NATOPS.

Lt. Weidman is with VT-86, NAS Pensacola, Fla. Lt. King is with VF-84, NAS Oceana, Va.

. . .I was down to 2.4, but I figured we'd be aboard in five minutes so I kept my mouth shut. No sense embarrassing myself if the only person who would be any wiser was the plane captain. . .

The Old Surprise Bingo Trick

By Lt. Chip Ridley

I WAS launched off the carrier as Dash 2 on an SSC hop to try to locate the bad guys. It was an anti-surface warfare exercise with the Orange Forces. As luck would have it, 20 minutes later I was calling lead on the back radio, "Danny Boy, I found one."

"Roger, say your posit."

Five minutes later he was also overhead the "enemy" DD. When we called the carrier, they requested that he remain overhead and sent me off to try and find some more "hostiles."

Fifteen minutes later, plans changed when strike instructed me to join with an A-6 and another A-7 to conduct a spontaneous WASEX on the DD I had found earlier. Our three-plane strike group loitered at the rendezvous point for about 20 minutes while all the necessary comm links and clearances were worked out.

Finally we got the COMMEX call and pushed for the target. Unfortunately, the intruder, who had the lead, had never received good locating data on the target, so the heading he chose was 60 degrees off the one I was showing on my INS. Being a new guy with only four months in the squadron, I figured he must know something I didn't, so I kept my mouth shut and just hung on to his wing. Sure enough, after about five minutes he called up my lead and asked him for a cut to the Orange Force destroyer.

As we corrected our course, descended and increased speed, I looked down and realized I had just reached my fuel ladder. Oh well, I thought, 4,500 pounds is a lot of gas, so I'll press on. Eighty miles later I was off target and on my way to marshal. I was 800 pounds below my fuel ladder, but the marshal controller didn't seem worried when I called 3.0, so I started to relax. I figured that when Danny gets up here, he'll take the lead, ask me my state and, if it worries him, he'll do something about it. Of course, it didn't work out that way.

"Homer, my state's 3.8. You've got the lead. Take me down."

Great. Oh well, I was down to 2.4, but I figured we'd be aboard in five minutes, so I kept my mouth shut. No sense embarrassing myself if the only person who would be any wiser was the plane captain.

I was now down to 2.1 in the break with the bingo at 1.9. I figured no problem, I'd be aboard here any second. I extended just a little off the 180 to make sure I didn't get a foul deck.

"Wave it off, long in the groove," tower ordered.

Going by the tower with the gear and flaps coming up, I became an instant celebrity.

"401, tower, what are you doing?"

"401's bingo, boss."

"What?"

"401's state 1.9."

"1.9! Roger, Bingo."

Pulling out the pocket checklist, I started my climb. The INS said 060 degrees, and when I found the page, the manual said FL 240. Seventy miles from Miramar I had leveled off, contacted San Diego approach and was riveted on the fuel gauge when I got the call from on high.

"401, this is Climax on guard."

Oh, great. I had forgotten to check out with departure and strike.

"Go ahead, sir."

"401, say your state."

"1.2, sir."

"Go to North Island if it's closer."

Good choice. Although Miramar had longer runways, and I was familiar with it, North Island was closer and would save me at least five minutes flying time.

The flight ended uneventfully with a trap at North Island. I landed with about 650 pounds. Three hours later I was back aboard the boat, wiser and more famous.

First of all, you make a fuel ladder for a reason. Use it or you're probably going to embarrass yourself. No one will ever say anything to you for turning back for fuel; they had much to say to me though.

Second, if you do get low state, tell somebody. If you have to tank, probably the worst thing that will happen to you is a lecture from the skipper. If at all possible, avoid having to discuss your poor judgment with the captain on guard.

Third, think about your bingo alternatives. The briefed bingo may be the best choice, but if you can find a closer field that's acceptable, go there. One thing I learned is that a bingo profile will get you there, but it doesn't leave any room for mistakes.

Finally, know your bingo procedures and locations cold. The time to pull out the pocket checklist is not in the climb. It's in the ready room before the flight. ◄

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